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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/712,886

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EXAMINER

DASGUPTA, SOUMYA

ART UNIT

PAPER NUMBER

2176

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/712,886	Applicant(s) BOZAK ET AL.	
	Examiner SOUMYA DASGUPTA	Art Unit 2176	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 June 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Applicant's Response

In the applicant's response for application 10/712,886 dated 6/12/2008, the applicant amended Claims 1, 4, and 5; and cancelled Claims 3; and argued against all the rejections and objections.

The double patenting rejection is withdrawn for Claims 1, 3, and 5, for the time being, because the applicant amended the Claims 1 and 5 and cancelled Claim 3.

Claims 1-13, as originally filed, are currently pending and have been considered below.

Claims 1, 4, and 5 are independent claims.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.

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2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1-2 and 9-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zhang et al (US 2003/0041142; PG Pub Date: Feb 27, 2003; Patent Filing Date: Aug 27, 2001; hereafter Zhang) in view of IBM Redbooks (Reference U – “Intro to Grid Computing with Globus”; Copyright Sep 2003; hereafter IBM).

Claim 1:

Zhang discloses **a computer-readable storage device comprising instructions for causing a processor to receive a request to visualize a network, the network comprising managers running on a plurality of computers functioning as nodes;** (Fig 4 → Zhang discloses “receive a request to visualize a network, the network comprising managers running on a plurality of computers functioning as nodes” in that the system shows nodes represented as servers connected by directional arrows.)

and generate, in response to the request, a display comprising: a graph with edges and vertices, the vertices representing the nodes in the network, wherein each of the edges includes a directional representation of a hierarchical association between two of the managers. (Fig 4 → Zhang discloses “a graph with

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edges and vertices, the vertices representing the nodes in the network, wherein each of the edges includes a directional representation of a hierarchical association between two of the managers” in that the system shows nodes represented as servers connected by directional arrows.)

Zhang does not appear to explicitly disclose nodes as **grid nodes**, and networks and managers as **grid networks** and **grid managers**, computer applications as **computer grid applications** and a network layout as a **computer grid** layout.

IBM discloses hierarchical structured network and nodes as **grid nodes**, and networks and managers as **grid networks** and **grid managers**, computer applications as **computer grid applications** and a network layout as a **computer grid** layout. (pgs 12, 24-25, 126 → IBM discloses a system with the nodes that are used in a grid computing network. The nodes can represent clients, servers, and other components of a network system.)

Zhang and IBM are analogous art because they are from the same field of endeavor of networking.

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At they time of the invention, it would have been obvious to one of ordinary skill in the art, having the teachings of Zhang and IBM before him or her, to incorporate a GUI that contains directional lines that connect servers and other computes together in a network environment, as disclosed by Zhang, with grid computing system, as disclosed by IBM.

Since grid network is a type of computer network, the motivation for doing so would have been to allow a user to set up different types of network systems using directional arrows.

Therefore, it would have been obvious to combine Zhang with IBM to obtain the invention as specified in the instant claim.

Claim 2:

Zhang and IBM discloses the limitations of Claim 1.

Zhang also discloses **the association is peer-to-peer**. (Fig 4 → Zhang discloses a network environment that is connected in a server-server format, a server-client format,

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or a peer-to-peer format. It is well-known in the art that networks are connected in a server-server format, a server-client format, or a peer-to-peer format.)

Claim 9:

Zhang and IBM discloses the limitations of Claim 1.

Zhang discloses **the vertices display a network address for the corresponding grid node.** (paragraph 98 → Zhang discloses “the vertices display a network address for the corresponding grid node” in that the pop-up menu for the designated shows user options and other metadata. The examiner notes that network addresses are a form of metadata. The examiner notes that it is well known in the art for network addresses to be labeled next to the network node. This is done in order to label the node.)

Claim 10:

Zhang and IBM discloses the limitations of Claim 1.

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Zhang discloses **the vertices display applications currently running on the corresponding grid node.** (paragraph 98 → Zhang discloses “the vertices display applications currently running on the corresponding grid node” in that the pop-up menu for the designated shows user options and other metadata. The examiner notes that computer applications are a form of metadata.)

Claim 11:

Zhang and IBM discloses the limitations of Claim 1.

Zhang discloses **in response to user input identifying one of the nodes, a display of a network running on the identified node.** (paragraph 98 → Zhang discloses “in response to user input identifying one of the nodes, a display of a network running on the identified node” in that the pop-up menu for the designated shows user options and other metadata. The examiner notes that computer applications and displaying other networks are a form of metadata.)

Zhang does not appear to explicitly disclose hierarchical structured network and nodes as **grid nodes**, and networks and managers as **grid networks** and **grid managers**, computer applications as **computer grid applications** and a network layout as a **computer grid** layout.

IBM discloses hierarchical structured network and nodes as **grid nodes**, and networks and managers as **grid networks** and **grid managers**, computer applications as **computer grid applications** and a network layout as a **computer grid** layout. (pgs 12, 24-25, 126 → IBM discloses a system with the nodes that are used in a grid computing network. The nodes can represent clients, servers, and other components of a network system.)

Zhang and IBM are analogous art because they are from the same field of endeavor of networking.

At they time of the invention, it would have been obvious to one of ordinary skill in the art, having the teachings of Zhang and IBM before him or her, to incorporate a GUI that contains directional lines that connect servers and other computes together in a network environment, as disclosed by Zhang, with grid computing system, as disclosed by IBM.

Since grid network is a type of computer network, the motivation for doing so would have been to allow a user to set up different types of network systems using directional arrows.

Therefore, it would have been obvious to combine Zhang with IBM to obtain the invention as specified in the instant claim.

Claim 12:

Claim 12 corresponds to Claim 10.

Claim 13:

Zhang and IBM discloses the limitations of Claim 1.

Zhang discloses **a display representing a relationship between a network running on the identified node and a network running on another one of the nodes.** (Fig 4 → Zhang discloses “a display representing a relationship between a network running on the identified node and a network running on another one of the nodes” in that the system shows nodes represented as servers connected by directional arrows.)

Zhang does not appear to explicitly disclose hierarchical structured network and nodes as **grid nodes**, and networks and managers as **grid networks** and **grid managers**, computer applications as **computer grid applications** and a network layout as a **computer grid** layout.

IBM discloses hierarchical structured network and nodes as **grid nodes**, and networks and managers as **grid networks** and **grid managers**, computer applications as

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computer grid applications and a network layout as a **computer grid** layout. (pgs 12, 24-25, 126 → IBM discloses a system with the nodes that are used in a grid computing network. The nodes can represent clients, servers, and other components of a network system.)

Zhang and IBM are analogous art because they are from the same field of endeavor of networking.

At they time of the invention, it would have been obvious to one of ordinary skill in the art, having the teachings of Zhang and IBM before him or her, to incorporate a GUI that contains directional lines that connect servers and other computes together in a network environment, as disclosed by Zhang, with grid computing system, as disclosed by IBM.

Since grid network is a type of computer network, the motivation for doing so would have been to allow a user to set up different types of network systems using directional arrows.

Therefore, it would have been obvious to combine Zhang with IBM to obtain the invention as specified in the instant claim.

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Claims 4-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zhang et al (US 2003/0041142; PG Pub Date: Feb 27, 2003; Patent Filing Date: Aug 27, 2001; hereafter Zhang) in view of Boylan et al (US 2003/0101331; PG Pub Date: May 29, 2003; Patent Filing Date: Dec 6, 2001; hereafter Boylan) in further view of IBM Redbooks (Reference U – “Intro to Grid Computing with Globus”; Copyright Sep 2003; hereafter IBM).

Claim 4:

Zhang discloses **displaying a first graphical user interface (GUI), the first GUI comprising: a graph with vectors and nodes for visualizing a network, the nodes representing computers running a network and the vectors representing relations between pairs of network, each pair comprising a superior network and an inferior network,** (Fig 4 → Zhang discloses “displaying a first graphical user interface (GUI), the first GUI comprising: a graph with vectors and nodes for visualizing a network, the nodes representing computers running a network and the vectors representing relations between pairs of network, each pair comprising a superior network and an inferior network” in that the system shows nodes represented as servers connected by directional arrows. The inferior network is the node at the head of the arrow and the superior network is at the tail end of the arrow.)

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Zhang discloses **for each node, an expandable structure showing computer**

applications running on a computer represented by the node, (paragraph 98 →

Zhang discloses “each node, an expandable structure showing computer applications

running on a computer represented by the node” in that the pop-up menu for the

designated shows user options and other metadata. The examiner notes that computer

applications are a form of metadata.)

Zhang discloses **receiving, with an event handler, a request identifying one of the**

nodes in the first GUI (paragraph 98 → Zhang discloses “receiving, with an event

handler, a request identifying one of the nodes in the first GUI” in that the pop-up menu

for the designated shows user options and other metadata. The examiner notes that

computer applications are a form of metadata.)

Zhang does not appear to explicitly disclose **displaying a second GUI in response to**

the request, the second GUI illustrating the network running on the identified

node and an inferior network on a node other than the identified node.

Boylan discloses **displaying a second GUI in response to the request, the second**

GUI illustrating the network running on the identified node and an inferior

network on a node other than the identified node. (Fig 1 and 2 → Boylan discloses

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“displaying a second GUI in response to the request, the second GUI illustrating the network running on the identified node and an inferior network on a node other than the identified node” in that the nodes are disclosed in different hierarchical formats. The inferior nodes and the superior nodes would correspond to the tree in Fig 2 with respect to their relationship with each other in Fig 1.)

Zhang and Boylan do not appear to explicitly disclose nodes as **grid nodes**, and networks and managers as **grid networks** and **grid managers**, computer applications as **computer grid applications** and a network layout as a **computer grid** layout.

IBM discloses hierarchical structured network and nodes as **grid nodes**, and networks and managers as **grid networks** and **grid managers**, computer applications as **computer grid applications** and a network layout as a **computer grid** layout. (pgs 12, 24-25, 126 → IBM discloses a system with the nodes that are used in a grid computing network. The nodes can represent clients, servers, and other components of a network system.)

Zhang, Boylan, and IBM are analogous art because they are from the same field of endeavor of networking.

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At the time of the invention, it would have been obvious to one of ordinary skill in the art, having the teachings of Zhang, Boylan, and IBM before him or her, to incorporate a GUI that contains directional lines that connect servers and other computers together in a network environment, as disclosed by Zhang, with grid computing system, as disclosed by IBM, and with a hierarchical tree structured GUI that represents the relationships between the nodes, as disclosed by Boylan.

Since grid network is a type of computer network, the motivation for doing so would have been to allow a user to set up different types of network systems using directional arrows and view the relationships of the nodes in a graphical manner.

Therefore, it would have been obvious to combine Zhang and Boylan with IBM to obtain the invention as specified in the instant claim.

Claim 5:

Claim 5 corresponds to Claim 4.

Claim 6:

Zhang, Boylan, and IBM disclose the limitations of Claim 6.

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Zhang discloses **displaying nodes representing networks in the third list of networks and drawing vectors from the networks in the second list of networks to networks in the third list of networks.** (Fig 4 → Zhang discloses “displaying nodes representing networks in the third list of networks and drawing vectors from the networks in the second list of networks to networks in the third list of networks” in that the system shows nodes represented as servers connected by directional arrows.)

Both Zhang and Boylan disclose **sending a third query to each of the networks in the first list of networks requesting a third list of grid managers having an inferior relation to each networks in the first list of networks;** (Fig 1 and 2 → Boylan discloses “sending a third query to each of the networks in the first list of networks requesting a third list of grid managers having an inferior relation to each networks in the first list of networks” in that the nodes are disclosed in different hierarchical formats. The inferior nodes and the superior nodes would correspond to the tree in Fig 2 with respect to their relationship with each other in Fig 1. Fig 4 → Zhang discloses “sending a third query to each of the networks in the first list of networks requesting a third list of grid managers having an inferior relation to each networks in the first list of networks” in that the system shows nodes represented as servers connected by directional arrows. The inferior network is the node at the head of the arrow and the superior network is at the tail end of the arrow.))

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Zhang and Boylan do not appear to explicitly disclose nodes as **grid nodes**, and networks and managers as **grid networks** and **grid managers**, computer applications as **computer grid applications** and a network layout as a **computer grid** layout.

IBM discloses hierarchical structured network and nodes as **grid nodes**, and networks and managers as **grid networks** and **grid managers**, computer applications as **computer grid applications** and a network layout as a **computer grid** layout. (pgs 12, 24-25, 126 → IBM discloses a system with the nodes that are used in a grid computing network. The nodes can represent clients, servers, and other components of a network system.)

Zhang, Boylan, and IBM are analogous art because they are from the same field of endeavor of networking.

At the time of the invention, it would have been obvious to one of ordinary skill in the art, having the teachings of Zhang, Boylan, and IBM before him or her, to incorporate a GUI that contains directional lines that connect servers and other computers together in a network environment, as disclosed by Zhang, with grid computing system, as disclosed by IBM, and with a hierarchical tree structured GUI that represents the relationships between the nodes, as disclosed by Boylan.

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Since grid network is a type of computer network, the motivation for doing so would have been to allow a user to set up different types of network systems using directional arrows and view the relationships of the nodes in a graphical manner.

Therefore, it would have been obvious to combine Zhang and Boylan with IBM to obtain the invention as specified in the instant claim.

Claim 7:

Claim 7 corresponds to Claim 6.

Claim 8:

Claim 8 corresponds to Claim 6.

Response to Arguments

Claims (1-3, 5-7, and 13) Rejection under 35 USC 103(a):

For Claims 1 and 4, the applicant argues that the prior art, Besaw (US 5,576,789), does not disclose “directional representation of a hierarchical association.” Applicant’s arguments, see pg 9, filed 4/12/2008, with respect to the rejection(s) of claim(s) 1 and 5 under 35 USC 103 have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Zhang in view of IBM.

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Claims 2, 3, 6, 7, and 13 are rejected due to their dependency on Claims 1 and 5 respectively.

Claims (4 and 8-12) Rejection under 35 USC 103(a):

The applicant argues that the prior art, Besaw (US 5,576,789), does not disclose “displaying a second GUI in response” to the request, the second GUI illustrating the grid manager running on the identified node and an inferior grid manager on a node other than the identified node. Applicant's arguments with respect to Claim 4 have been considered but are moot in view of the new ground(s) of rejection.

Claims 2, 3, 6, 7, and 13 are rejected due to their dependency on Claims 1 and 5 respectively.

Claims 8-12 are rejected due to their dependency on Claim 4 respectively.

Official Notice:

The examiner cites Official Notice in Claims 8 and 9. In Claim 8, the examiner states that “it is well-known in the art that networks are connected in a server-server format, a server-client format, or a peer-to-peer format.” Please see attached NPL reference V - “A Peer-to-Peer Network Simulator.” In Claim 9, the examiner states that “network addresses are a form of metadata. The examiner notes that it is well known in the art for network addresses to be labeled next to the network node. This is done in order to label the node.” Please see Klevans (US 2001/0049594; Effective Filing Date: May 25, 2000).

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In Figs 4-7, the nodes are labeled and contain pointers to files and functions. Since these labels are metadata, then network addresses are also metadata because network addresses are a form of label on a node representing a specific network. For more information regarding the “well-known” claim terminology, please visit the following websites:

- metadata (<http://en.wikipedia.org/wiki/Metadata>)
- peer-to-peer (<http://en.wikipedia.org/wiki/Peer-to-peer>)
- grid computing (http://en.wikipedia.org/wiki/Grid_computing)
- Server ([http://en.wikipedia.org/wiki/Server_\(computing\)](http://en.wikipedia.org/wiki/Server_(computing)))
- Client-Server (<http://en.wikipedia.org/wiki/Client-server>)
- application server (http://en.wikipedia.org/wiki/Application_server)
- computer network (http://en.wikipedia.org/wiki/Computer_network), etc.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not

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mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to SOUMYA DASGUPTA whose telephone number is (571)272-7432. The examiner can normally be reached on M-Th 9am-7pm, F 9am-1pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Doug Hutton can be reached on 571-272-4137. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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SD

/Doug Hutton/

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